CV

Paul Misut

EDUCATION

B.S., Cornell University, Philosophy and Mathematics, 1988
M.S., SUNY Stony Brook, Earth and Space Sciences, 1991
M.E., Cooper Union, Civil Engineering, 1995

RELEVANT PROFESSIONAL EXPERIENCE

DATES: From: 02/2008 To:10/2013
PROJECT TITLE: Estimation of Hydraulic Properties at Well Fields, Suffolk County, N.Y.
BACKGROUND: Suffolk County Water Authority supplies ground water to over 1 million people on Long Island. Improved understanding aquifer hydraulics near wellfields benefits supply management.
RESULTS: A scientifc investigations report documented one of the aquifer tests conducted during this study; other tests were placed in an aquifer test archive. This project is described further at http://ny.cf.er.usgs.gov/nyprojectsearch/projects/2457-BEE00.html
DATES: From: 10/2009 To:10/2010
PROJECT TITLE: Evaluation of Manufactured Gas Plants, Suffolk County, N.Y.
BACKGROUND: A massive manufactured gas plant in Bayshore, New York was being remediated with oxygen injection. The local department of health voiced concerns about the saftey of these operations.
RESULTS: For the first time in North America, OxyPAHs were established in groundwater samples. The USGS toxic substances hydrology program provided funding to present these results at a national conference. This project is described further at http://ny.cf.er.usgs.gov/nyprojectsearch/projects/2457-BEE00.html
DATES: From: 02/2001 To: present
PROJECT TITLE: Simulation of Ground-Water Flow and Chemistry to Evaluate Water-Management Alternatives in Kings and Queens Counties, New York
BACKGROUND: New York City experiences exceptional problems of water supply to its 8 million people, most living on islands. Water is mainly sourced from upstate reservoirs; however, novel approaches to integration with groundwater resources are treated in this project with complex research methods. Methods included application of coupled geochemical/ solute transport modeling to evaluate feasibility of storage and recovery in a previously-unexplored deep aquifer. Deep cores were obtained and subject to mineralogical and and microbiological analysis.
RESULTS: Highly controversial and novel results were nationally publicized in *The New York Times.* This project is described further at http://ny.cf.er.usgs.gov/nyprojectsearch/projects/2457-A3K-2.html
DATES: From: 02/2009 To:10/2011
PROJECT TITLE: Simulation of saltwater intrusion, Manhasset Neck, Nassau County, N.Y.
BACKGROUND: The Manhasset Neck Peninsula has experienced intrusion of salt water. New modeling techniques were applied to predict future salt water intrusion.
RESULTS: Acceptable saltwater intrusion predictions were generated for a highly complex site which was previously unyielding.This project is described further at http://ny.cf.er.usgs.gov/nyprojectsearch/projects/2457-BEE00.html

SELECT CONFERENCE PAPERS / PRESENTATIONS

Misut, P.E., and Feldman, S., 1995, Simulation of sources of water to wells in central Suffolk County, N.Y., USGS OFR 95-703.
Misut, P.E., and Busciolano, R., 2010, Hydraulic Properties of the Magothy and Upper Glacial Aquifers at Centereach, Suffolk County, New York, USGS SIR 2009-5190, 22p.
Yager, R.M., Misut, P.E., Langevin, C.D., and Parkhurst, D.L., 2009, Brine migration from a flooded salt mine in the Genesee Valley, Livingston County, New York: Geochemical modeling and simulation of variable-density flow: U.S. Geological Survey Professional Paper 1767, 59 p.
Misut, P.E. and Voss, C.I., 2007, Freshwater-saltwater transition zone movement during aquifer storage and recovery cycles in Brooklyn and Queens, New York City, USA: Journal of Hydrology.
Misut, P.E., and Brown, C.J., 1996, Solute transport along ground-water flowpaths near the Nassau/Suffolk County border, Long Island, New York, in "Hydrology and Hydrogeology of Urban and Urbanizing Areas, AIH.